

Notes on the Systematy of Solomon Islands' Plants and some of their New Guinea Relatives, X.

by

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X. Sapotaceae

The Sapotaceae of the Solomon Islands are in general not very well known, and material of one of its most interesting genera, *Chelonespermum*, was so scrappy that for a long time it remained a rather doubtful one. In the large collections by T. C. Whitmore from many parts of the Solomons this genus turns out to be well represented and seems to be sufficiently distinct to keep it separate from *Burckella*.

Apart from the specimens in *Chelonespermum*, two new species in *Burckella* and *Palaquium* are found, descriptions of which will be given below. In addition we will add some remarks on *Chelonespermum*.

The sheets examined were all at LAE; there are replicates at BSIP, K, L, SING and US. The last two series are incomplete.

A. *Burckella* Pierre

***Burckella sorei* Royen n.sp.** Fig. 1

Arbor magna. Ramuli subcrassi, foliis, bracteis et flores apice conferta, dense pallide brunneo-sericei, glabrescentes. Folia apice ramulorum conferta, pseudo-verticillata, oblongo-elliptica, 10–14 × 4–6 cm., apice obtuse acuminata, basi rotundata vel late cuneata interdum obliqua, nervi secundarii 17–22 pares, arcuatim conjuncti, tertiarum reticulati; utrinque glabra. Petiolus 2.2–4 cm. longus, glaber, supra late canaliculatus. Flores fasciculi; pedicelli 3–6 mm. longi, dense ferrugineo-sericei. Sepala 4, ovata, 2–2.5 × 1–1.5 mm., subacuta, dorsa subcarinata, extus disperse sericea, apice ferrugineo-plumulosa, intus glabra. Corolla 8-lobata, glabra sed apice plumulosa (ultimo glabrata?). Stamina 15, filamenta pilosa, antherae pilosa apice solis. Ovarium 4-loculare, glabrum. Fructus obovoideo-ellipsoideum, usque ad 7.5 × 3.8 cm., 1-spermus, glaber. Semen usque ad 5 × 2.8 cm., cicatrice testam $\frac{3}{4}$ parte includente irregulariter bullata.

Tree up to 33 m. with dense crown. Buttresses steep and broad, up to 2.4 m. Bole fluted. Bark surface dark, dull brown, closely fissured, in part with elongate, loose scales. Cut inner bark orange-brown or pink, with copious white exudate. Wood orange-yellow or pink-brown. Branchlets relatively slender, densely pale brown, sericeous, ultimately glabrous. Leaves conferted at tip of flushes,

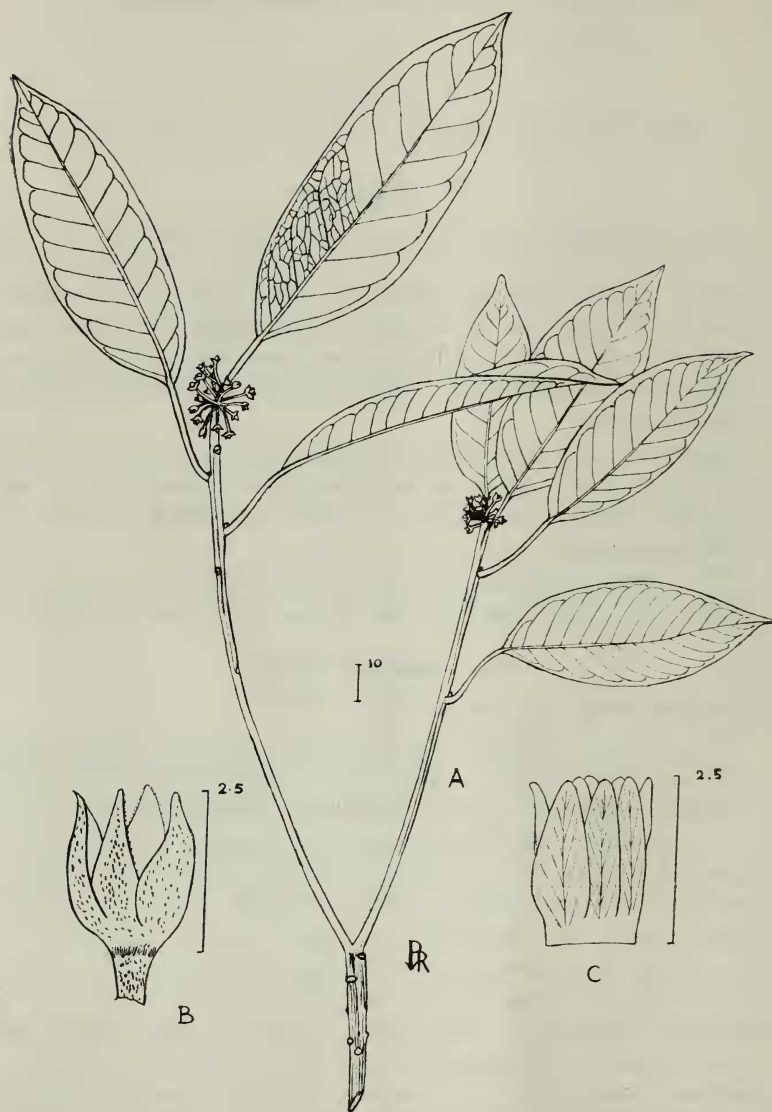


Fig. 1. *Burckella sorei*.

Whitmore BSIP 2771. A Habit, B Calyx, C Corolla. All sizes in mm.

sometimes seemingly whorled, limb oblong-elliptic, 10–14 by 4–6 cm., short obtusely acuminate at tip, rounded to broadly cuneate at base and sometimes asymmetric; midrib narrowly crested above, rounded below, lateral nerves 17–22 on either side of midrib, inconspicuous above, distinct below, archingly joined, nervation widely reticulate, hardly visible above, conspicuous below; glabrous on either side; Petiole 2.2–4 cm., broadly grooved in the apical part, flat in lower parts, glabrous. Flowers closely bundled at tip of branchlets; pedicels 3–6 mm. long, densely ferruginous, silky. Sepals 4, ovate, 2–2.5 by 1–1.5 mm., subacute, slightly crested on outside, scattered silky hairy on inside, with a plumule of rusty hairs at tip, glabrous on inside, the 2 inner sepals with membranous margins. Corolla-tube c. 1 mm. long, glabrous, lobes 8, ovate, 2–3 by 1–1.2 mm., obtuse, plumose at tip (ultimately glabrous?). Stamens 15, c. 1 mm. long, filaments hairy, anthers hairy at tip only. Ovary 4-celled, glabrous, style c. 1 mm. long, glabrous. Fruits obovoid-ellipsoid, up to 7.5 by 3.8 cm., subacute at tip, glabrous, 1-seeded; pericarp fleshy. Seed up to 5 by 2.8 cm., scar covering $\frac{3}{4}$ of entire seed, roughly knobbly.

SOLOMONS: Guadalcanal: BSIP 2771, Rere R. c. 3 miles inland, T. C. Whitmore, Nov., flowers, Holotype in SING.

Santa Ysabel: BSIP 2477, Garona, a few miles W. of Maringe Lagoon, T. C. Whitmore Oct., fruits.

A lowland rain-forest species.

The flowers are known in the bud stage only and details particularly those of the stamens and ovary, are incomplete.

This species, which by its 8 corolla-lobes belongs to *Burckella*, could not be matched against any of the known *Burckella* species, not even against the very variable *Burckella obovata* Pierre, from which it differs by the larger number of lateral nerves coupled with smaller leaves. The calyx of *B. sorei* is much smaller than that of *B. obovata*, but the flowers being young, this detail might not be reliable.

The species is named in honour of Mr. J. Sore, a tree-climber working for the Forestry Department B.S.I.P., and living on Guadalcanal at Bambasu village in Longgulenggu near the Rere R. where the type material was collected.

Kwara'ae names: *Faigona*, *Kona*.

B. *Chelonespermum* Hemsley

This genus was described by Hemsley (Ann. Bot. 6, 205, 1892) based mainly on the peculiar seeds that separate it immediately from the closely related genus *Burckella*. Of the four species described only *C. majus* had leaves (though fragmentary) and fruits, while *C. fijiense* was based on leaves and seeds only. The other two species, *C. minus* and *C. unguiculatum* are based on

seeds only. In 1959 I described a new species (Nova Guinea N.S. 10, 140) *C. banikiense*, from Banika Island, in the Russells, of which at that time no fruits were known. The reason to place this species in *Chelonespermum* and implicitly the maintaining of that genus against *Burckella* was the number of corolla-lobes in *Chelonespermum*. In *Burckella* this is 8, in *Chelonespermum* 4, rarely 5. Additional to this, though the differences are overlapping, are the number of cells in the ovary, viz. 1–4 in *Chelonespermum*, (3–) 4–8 in *Burckella*.

Though these differences are small, they are not smaller than is recognised in many other groups in the Sapotaceae, for instance *Madhuca* and *Burckella* 4, *Palaquium* 6 sepals, though in both *Madhuca*, *Burckella* and *Palaquium* occasionally 5 sepals are found.

It is doubtful whether the fruits, and more in particular the seeds ultimately can be used as sufficiently different to keep the genera apart, emphasizing only their close relationship. In *Burckella* the scar, representing that part of the seed with which it is attached to the placenta, is usually smooth, without any appendages, while those of *Chelonespermum* have a most intricate system of crests, knobs and protuberances. However, in *Burckella magusun*, described by myself in 1959 (l.c.) the scar is very irregularly grooved and knobbly, and the same applies to *Burckella sorei* described in this paper.

In *C. banikiense*, material of which turned up several times in Whitmore's collection, the seeds show the same type of scar as in the two *Burckella*'s mentioned in the previous paragraph. To complete the description given in 1959, that of the fruits and seeds follows here.

C. banikiense. Fig. 2. Amended description. Fruits globose, narrowed at base, up to 3.5 cm. across, pericarp fleshy-woody, glabrous; 1-seeded. Testa of seed narrow, brown, glossy, scar covering about $\frac{3}{4}$ of entire seed, knobbly; seeds ellipsoid, c. 2 by 1.2 by 1 cm. obtuse at either end.

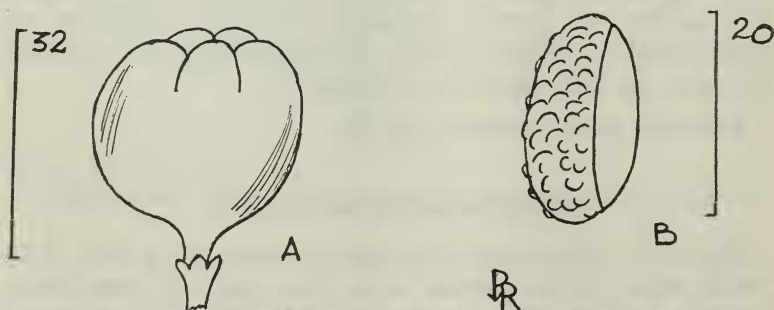


Fig. 2. *Chelonespermum banikiense*.

Whitmore BSIP 1512. A Fruit. B Seed. All sizes in mm.

SOLOMONS: New Georgia Islands: Kolombangara: BSIP 1512, W. coast, Sandfly Hbr. T. C. Whitmore fruits, Febr. Baga BSIP 2849, Whitmore's Collectors, fruits, Jan. BSIP 3008, Whitmore's Collectors, fruits, Febr.

Shortland: BSIP 5876, N. at 1 mile west of Kupola R., Whitmore's Collectors, flowers, May.

Kwara'ae names: *Faigona*, *Kona*.

C. *Palaquium* Blanco

***Palaquium masuui* Royen n.sp.** Fig 3.

Arbor magna. Ramuli ferrugineo-sericei, glabrescentes; stipulae lanceolato-subulatae, acutae, dense ferrugineo-pilosae. Folia apice ramulorum subconferta, obovata, 6–15 × 4–7 cm., apice obtuse-acuminata, basi cuneata, supra glabra basi excepta, subtus glabra; nervi secundarii utroque latere 11–15, sursum evanescentes, tertiarum transversae. Petiolus 2–4 cm. longus. Pedicellus 2–2.8 cm. longus, dense ferrugineo-pilosus. Sepala 6, extus ferrugineo-pilosus, intus pilosus in parte apicali solis. Corolla intus glabra, tubus extus ferrugineo-sericeus, lobi sericei in linea mediana. Stamina c. 15, filamenta glabra, antherae extus ferrugineo-pilosae. Ovario 6-loculare, hemi-globosum vel late ovoideum, ferrugineo-sericeum, stylus glaber. Fructus ignotus.

Tree up to 21 m., d.b.h. 45 cm. Buttresses up to 2.4 m. Bark surface dark brown, smooth, with close, fine superficial fissures. Cut inner bark red or orange-brown, fibrous, with sticky white exudate. Sapwood pink or orange-fawn, heartwood dark dull brown or red. Branchlets rusty sericeous, ultimately glabrous. Stipules lanceolate-subulate, 2–3 mm. long, densely rusty hairy. Leaves (sub-) crowded at tip of branchlets, limb obovate, 6–14 by 4–7 cm., obtusely acuminate at tip, cuneate at base and decurrent along upper side of petiole, midrib shallowly grooved above and longitudinally crested, prominent and rounded below, lateral nerves 7–9 on either side of midrib, diminishing until inconspicuous along margin, prominulous and grooved above, prominent below, nervation transverse, slender; glabrous except above, greyish hairy at the extreme base. Petiole 2–4 cm. long, grooved above, rounded below but crested in basal part, densely rusty or greyish silky, becoming glabrous. Flowers in 2–4 flowered, axillary clusters or solitary; pedicels angular, 2–2.8 cm. long, densely appressed, rusty hairy. Sepals 6, outer 3 ovate-triangular, 3–4 by 3–3.5 mm., obtuse or obtusely acuminate, inner 3 more lanceolate-ovate, 3.5–5 by 3–3.5 mm., rounded, crested, all sepals appressed rusty hairy on outside, sparsely hairy on inside in apical part only, inner sepals plumose at tip and glabrous along the membranous margins.

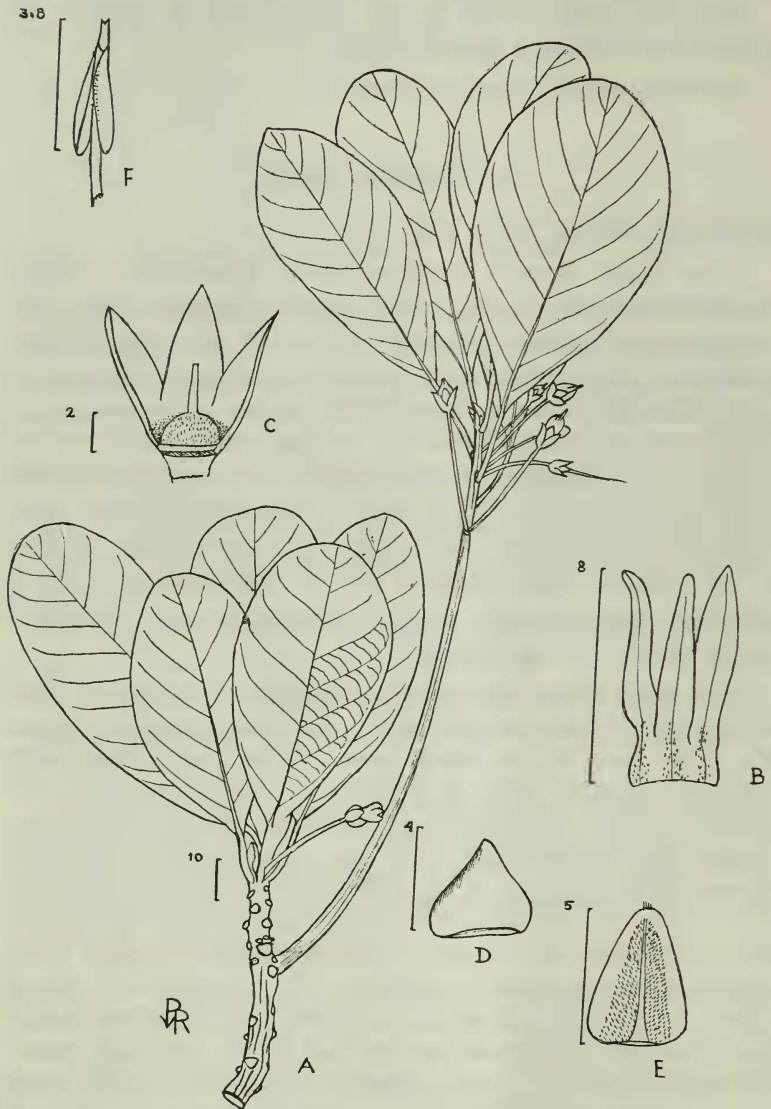


Fig. 3. *Palaquium masuui*.

Whitmore BSIP 1638. A Habit. B Corolla outside. C Ovary with part of corolla. D Outer sepal. E Inner sepal. F Anther. All sizes in mm.

Corolla-tube 2–3 mm. long, lobes 6, elliptic or oblong-elliptic, 5–6 by 2.5–3 mm., rounded or truncate at tip; corolla on outside appressed rusty hairy on tube and along part of midrib or corolla-lobes, glabrous on inside. Stamens c. 15, c. 6 mm. long, filaments c. 4.5 mm. long, glabrous, anthers c. 2.5 mm., connective prolonged, truncate or bifid at tip, appressed rusty hairy on outside. Ovary 6-celled, hemiglobose or broadly ovoid, 2–3.5 mm. across, appressedly rusty hairy, style up to 15 mm. long, glabrous. Fruits not known.

SANTA CRUZ: Vanikoro: BSIP 1638, E. side of Saboe Bay, T. C. Whitmore April, holotype in SING. BSIP 1814, ridge near Peou, T. C. Whitmore, May.

A species of primary or old secondary lowland rain forest.

This species is related to *Palaquium neo-ebudicum* Guillaumin, from the New Hebrides. It differs from that species by its appressed pubescence of branchlets, petioles and pedicels, by its smaller number of lateral nerves, by the pubescence of the sepals which are hairy on outside and only so on inside in the apical part, while those of *P. neo-ebudicum* are glabrous on the outside. Also the corolla has a pubescence on outside, that of *P. neo-ebudicum* being glabrous.

This species is named in honour of Mr. W. Masu'u, a tree-climber from Totonga Village, Longgolenggu, Guadalcanal, who worked for the Forestry Department, B.S.I.P., between 1962 and 1964.